

What is claimed is:

1. A condenser microphone comprising:

a cylindrical body;

5 a plurality of vibration plates that are formed into square shapes and placed within said body in parallel to a body axis line;

acoustic holes formed on side walls of said body in a direction vertical to said vibration plates; and

10 back pole plates that are placed on a side opposite to said acoustic holes with having said vibration plates in between and face said respective vibration plates with micro gaps in between, wherein a potential of said back pole plate changes in accordance with a vibration of said vibration plate.

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2. The condenser microphone according to claim 1, further comprising:

a contactor having a shape of a letter "U" whose bent portions are connected to respective longitudinal end portions of
20 said back pole plates, said back pole plates being a pair of back pole plates, each of which has a rectangular shape and is positioned in parallel to each other; and

a back pole plate case for holding said contactor, said pair of back pole plates and said vibration plates,

25 wherein said back pole plate case comprises a polymeric material having a liquid crystal structure.

3. The condenser microphone according to claim 1, further comprising:

30 a contactor having a shape of a letter "U" whose bent portions are connected to respective longitudinal end portions of

said back pole plates, said back pole plates being a pair of back pole plates, each of which has a rectangular shape and is positioned in parallel to each other; and

5 a back pole plate case for holding said contactor, said pair of back pole plates and said vibration plates, wherein

said back pole plate case is injection-molded after inserting said back pole plates and said contactor.

4. The condenser microphone according to claim 2, wherein
10 said back pole plate case is injection-molded after inserting said back pole plates and said contactor.

5. The condenser microphone according to claim 2, further comprising:

15 a square tray in which one plane, other than peripheral edge, protrudes over the other plane, thereby forming a depression and a penetration hole on a bottom thereof,

wherein said vibration plates are adhered on said peripheral edge on the side of said one plane of said tray, and

20 said vibration plate is held by said back pole plate case via said tray.

6. The condenser microphone according to claim 3, further comprising

25 a square tray in which one plane, other than peripheral edge, protrudes over the other plane, thereby forming a depression and a penetration hole on a bottom thereof,

wherein said vibration plates are adhered on said peripheral edge on the side of said one plane of said tray, and

30 said vibration plate is held by said back pole plate case via said tray.

7. The condenser microphone according to claim 4, further comprising a square tray in which one plane, other than peripheral edge, protrudes over the other plane, thereby forming
5 a depression and a penetration hole on a bottom thereof,

wherein said vibration plates are adhered on said peripheral edge on the side of said one plane of said tray, and

said vibration plate is held by said back pole plate case via said tray.

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8. The condenser microphone according to claim 7, wherein an electret material is laminated on said back pole plate.

9. The condenser microphone according to claim 5, wherein
15 an electret material is laminated on said back pole plate.

10. The condenser microphone according to claim 6, wherein an electret material is laminated on said back pole plate.

20 11. The condenser microphone according to claim 8, wherein:
a protrusion is formed at least on a pair of parallel end planes of said back pole plate; and

a fall-off prevention piece formed on said back pole plate case, said fall-off prevention piece being placed in contact with
25 said protrusion, thereby regulating a movement in a direction vertical to a plate surface of said back pole plate.

12. The condenser microphone according to claim 9, wherein
a protrusion is formed at least on a pair of parallel end
30 planes of said back pole plate; and

a fall-off prevention piece formed on said back pole plate

case, said fall-off prevention piece being placed in contact with said protrusion, thereby regulating a movement in a direction vertical to a plate surface of said back pole plate.

5 13. The condenser microphone according to claim 10, wherein:
a protrusion is formed at least on a pair of parallel end
planes of said back pole plate; and

a fall-off prevention piece formed on said back pole plate
case, said fall-off prevention piece being placed in contact with
10 said protrusion, thereby regulating a movement in a direction
vertical to a plate surface of said back pole plate.

14. The condenser microphone according to claim 11,
wherein said body has a shape of a substantially
15 quadratic prism having two pairs of parallel body side walls.

15. The condenser microphone according to claim 12,
wherein said body has a shape of a substantially
quadratic prism having two pairs of parallel body side walls.

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16. The condenser microphone according to claim 13,
wherein said body has a shape of a substantially
quadratic prism having two pairs of parallel body side walls.

25 17. The condenser microphone according to claim 1,
wherein said body has a shape of a substantially
quadratic prism having two pairs of parallel body side walls.

18. The condenser microphone according to claim 2,
30 wherein said body has a shape of a substantially
quadratic prism having two pairs of parallel body side walls.

19. The condenser microphone according to claim 3,
wherein said body has a shape of a substantially
quadratic prism having two pairs of parallel body side walls.